

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) Apparatus comprising:

a main memory;

an information processor operatively coupled to said main memory and having (a) a normal-operation mode in which coherence control is performed for making data in a cache memory of a processor identical to data in a main memory and (b) a power-saving mode in which coherence control is suppressed to lower the power consumption from the power consumption of the processor when in said normal-operation mode, said processor entering said normal-operation mode when an input/output device accesses main memory while said processor is in said power-saving mode;

an attribute setting module for setting a device area of said main memory to a non-cacheable attribute for exempting said device area from coherence control even in said normal-operation mode, said device area being **the an area of said main memory** accessed by the input/output device ~~of said information processor~~; and

an operation mode setting module for allowing said input/output device to access said device area while keeping the operation mode of said information processor in said power-saving mode when said input/output device requests access to said device area in said power-saving mode.

2. (Original) Apparatus according to claim 1, wherein if a device different from said input/output device accesses an area in said memory that is set to a cacheable attribute requiring said coherence control in said normal-operation mode, said operation mode setting module changes the operation mode of said information processor to the normal-operation mode.

3. (Currently amended) Apparatus according to claim 1, **wherein said input/output device comprises a first input/output device and** wherein when said processor receives in said power-saving mode an access request signal provided from **said a second** input/output device to access **an area of** said main memory **other than said device area**, said processor changes the operation mode of said information processor to said normal-operation mode **[,]** ~~and said operation mode setting module invalidates said access request signal to allow said input/output device to access said device area while keeping the operation mode of said information processor in said power-saving mode.~~

4. (Original) Apparatus according to claim 3, further comprising:

a register module for associating each of a plurality of pieces of mask data with each of a plurality of input/output devices and storing said mask data, said mask data specifying whether or not said access request signal received from each of said input/output device is invalidated;

a masking module for obtaining said access request signal for each input/output device and masking said access request signal with said mask data being associated with said input/output device and stored in said register module; and

an input module for inputting the input signal masked by said masking module into a processor to change the operation mode of said information processor;

wherein said operation mode setting module associates mask data invalidating said access request signal with said input/output device accessing said device area and stores said mask data in said register module to allow said input/output device to access said device area while keeping the operation mode of said information processor in said power-saving mode.

5. (Currently amended) A computer program product comprising computer executable instructions, stored on a computer readable medium, for signaling causing a computer to function as an information processor having a normal-operation mode in which coherence control is performed for making data in a cache memory of a processor identical to data in a main memory and a power-saving mode in which said coherence control is suppressed to lower the power consumption from power consumption in said normal-operation ~~mode and~~ mode, the computer program product comprising:

instructions for causing the information processor to enter entering said normal-operation mode when an input/output device accesses said main memory in said power-saving ~~mode, said computer being caused to function as~~ mode;

~~an~~ attribute setting ~~module~~ instructions for setting a device area of said main memory to a non-cacheable attribute for exempting said device area from said coherence control even in said normal-operation mode, said device area being ~~the an~~ an area of the main memory accessed by the input/output device ~~of said information processor; and~~

~~an~~ operation mode setting ~~module~~ instructions for allowing said input/output device to access said device area while keeping the operation mode of said information processor in said power-saving mode when said input/output device requests access to said device area in said power-saving mode.

6. (Currently amended) The program product according to claim 5, wherein said input/output device comprises a first input/output device, said program product further comprising wherein when said processor receives in said power-saving mode an access request signal provided from said input/output device to access said main memory, said processor instructions for changing changes the operation mode of said information processor

to said normal-operation mode when said processor receives in said power-saving mode an access request signal provided from a second input/output device to access an area of said main memory other than said device area[;:]

~~and said operation mode setting module invalidates said access request signal to allow said input/output device to access said device area while keeping the operation mode of said information processor in said power-saving mode.~~

7. (Canceled)

8. (Currently amended) A control circuit for controlling mode selection in an information processor having a normal-operation mode in which coherence control is performed for making data in a cache memory identical to data in a main memory and a power-saving mode in which said coherence control is suppressed to lower the power consumption from power consumption in said normal-operation mode and entering said normal-operation mode when an input/output device accesses said main memory in said power-saving mode, comprising: a register module for storing mask data for each input/output device, said mask data indicating whether or not an access request signal provided by each of a plurality of input/output devices for accessing said main memory is invalidated;

a masking module for obtaining said access request signal for each input/output device and masking said access request signal with mask data associated with said input/output device and stored in said register module; and

an input module for entering a signal masked by said masking module into a processor to switch the operation mode of said information processor.

9. (New) Apparatus according to claim 3, wherein said operation mode setting module invalidates an access request signal from said first input/output device to allow said first input/output device to access said device area while keeping the operation mode of said information processor in said power-saving mode.

10. (New) The computer program product of claim 6, further comprising operation mode setting instructions to invalidate said access request signal to allow said first input/output device to access said device area while keeping the operation mode of said information processor in said power-saving mode.